

L 28397-66

ACC NR: AT6013796

-0.980 v --  $\text{Fe}_3\text{O}_4 + 4\text{H}_2\text{O} + 8\text{e} \rightleftharpoons 3\text{Fe} + 8\text{OH}^-$ . The first delay corresponds to the reduction of  $\text{Fe}(\text{OH})_3$ ; the second, to the incomplete reduction of the  $\text{Fe}(\text{OH})_2$ ; and the third, to the reduction of the magnetite  $\text{Fe}_3\text{O}_4$ , which involves the highest overvoltage and lasts longest. The  $\text{O}_2$  dissolved in the electrolyte contributes to the passivation of Fe, chiefly accelerating the cathodic process, and it also exerts a similar effect on the passivation of Cu. The anodic behavior of Cu in the alkali medium at 25°C, characterized by two successively evolving processes of the formation of  $\text{Cu}_2\text{O}$  and  $\text{CuO}$  directly from Cu, corresponds to a virtually reversible -- in the amount of electricity (the amount of electricity expended on the formation of the  $\text{Cu}_2\text{O}$  ( $\text{CuOH}$ ) film is virtually equal to the amount of electricity expended on its reduction) -- potential delay on the galvanostatic curves with respect to the first process (formation of  $\text{Cu}_2\text{O}$ ). The reduction of  $\text{CuO}$  occurs during the intermediate stage of the formation of  $\text{Cu}_2\text{O}$ . The passivation potential of Ni in the alkali medium (0.1N and 1N NaOH solutions) is in nearly complete agreement with the equilibrium potential  $\text{Ni} + 2\text{OH}^- \rightleftharpoons \text{NiO} + \text{H}_2\text{O} + 2\text{e}$ . Orig. art. has: 7 figures and 3 tables.

SUB CODE: 13,07,11,20/ SUBM DATE: 19Jul65/ ORIG REF: 015/ OTH REF: 003

2/2 CC

ACC NR: AP6035926

SOURCE CODE: UR/0413/66/000/020/0193/0194

AUTHOR: Golubev, A. I.

ORG: none

TITLE: Self-priming centrifugal pump. Class 59, No. 187525

SOURCE: Izobreteniya, promyshlennyye obraztsy, tovarnyye znaki, no.20, 1966, 193-194

TOPIC TAGS: pump, centrifugal pump ~~self-priming centrifugal pump~~

ABSTRACT: The proposed self-priming pump has a built-in booster pump for producing a vacuum at the inlet. The pump is of compact design and insures a high vacuum. (see Figure 1).

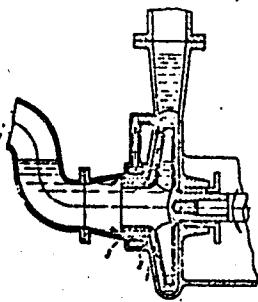


Fig. 1. Self-priming pump

1- booster; 2- sleeve; 3- impeller.

UDC: 621.671

Card 1/2

ACC NR: AP6035926

[WA-88]

Orig. art. has: 1 figure.

SUB CODE: 13 / SUBM DATE: 21Jul64/

Card 2/2

ACC NR: AT7004164 (A) SOURCE CODE: UR/0000/66/000/000/0080/0082

AUTHOR: Golubev, A. I. (Doctor of technical sciences); Ignatov, N. N.

ORG: none

TITLE: Effect of temperature on the rate of metal corrosion in the atmosphere

SOURCE: AN SSSR. Institut fizicheskoy khimii. Korroziya i zashchita konstruktionnykh splavov (Corrosion and protection of structural alloys) Moscow, Izd-vo Nauka, 1966, 80-82

TOPIC TAGS: corrosion, corrosion rate, metal corrosion, atmospheric metal corrosion, temperature, iron, zinc, copper, cadmium, magnesium alloy, atmospheric corrosion

ABSTRACT: A study was made at the Batumi Corrosion Station of the Institute of Physical Chemistry AN SSSR of the effect of temperature on the rate of corrosion in metals under atmospheric conditions. The study showed that in a subtropical climate an increase in temperature between 7—26 C has practically no effect on the rate of corrosion in copper, zinc, cadmium, and magnesium alloys; however, in

Card 1/2

UDC: 620.197.1:546.3.19

ACC NR: AT7004164

iron, the rate of corrosion increases rapidly within the above indicated temperature range. The authors acknowledge the assistance of G. G. Ryabtseva in conducting the experiments. Orig. art. has: 1 figure. [SP]

SUB CODE: 11, 14/SUBM DATE: 27Sep66/ORIG REF: 004/OTH REF: 002/

Card 2/2

ACC NR: AT7004174

SOURCE CODE: UR/0000/66/000/000/0236/0241

AUTHOR: Golubev, A. I. (Doctor of technical sciences)

ORG: none

TITLE: Study of the protective properties of lubricants

SOURCE: AN SSSR. Institut fizicheskoy khimii. Korroziya i zashchita konstruk-tionnykh splavov (Corrosion and protection of structural alloys) Moscow, Izd-vo Nauka, 1966, 236-241

TOPIC TAGS: lubricant, protective coating, electrolytic deposition, organic coating, metallurgy, thin film

ABSTRACT: A method is proposed for depositing thin (20—500  $\mu$ ) organic coatings on platinum electrodes of limited area ( $0.5 \text{ mm}^2$ ), and for effecting control of their quality (thickness, uniformity of deposition, air bubbles, etc.) using a Linnik microscope. The method provides an electrochemical means for studying the kinetics of diffusion of oxygen and the electrolyte through such protective coatings (lubricants) on electrodes with the use of polarographs, and provide

Card 1/2

UDC: 620.197.1:546.3.19

ACC NR: AT7004174

highly accurate recordings of volt ampere characteristics. Orig. art. has:  
3 figures.

[SP]

SUB CODE: 11, 13/SUBM DATE: 27Sep66/ORIG REF: 006/OTH REF: 001/

Card 2/2

ACC NR:

AT7004175 (A) SOURCE CODE: UR/0000/66/000/000/0242/0251

AUTHOR: Golubev, A. I. (Doctor of technical sciences); Rozbianskaya, A. A.; Pedanova, V. G.; Skvortsova, L. I.

ORG: none

TITLE: Osmotic diffusion of an electrolyte through thin layers of a lubricant using an electrochemical method

SOURCE: AN SSSR. Institut fizicheskoy khimii. Korroziya i zashchita konstruktsionnykh splavov (Corrosion and protection of structural alloys) Moscow, Izd-vo Nauka, 1966, 242-251

TOPIC TAGS: electrolytic deposition, protective coating, corrosion resistance, electrolyte diffusion, lubricant, swelling, hydrocarbon lubricant, permeability

ABSTRACT: The osmotic diffusion of oxygen and an electrolyte through thin layers of a lubricant was studied using a polarographic method. It was found that different lubricants have different degrees of permeability, caused by the gelling agent, its structure, and the properties of the oil. The permeability of hydro-

Cord 1/2

UDC: 620.197.1:546.3.19

ACC NR: AT7004175

carbon lubricants is basically determined by their capacity for swelling. The overall characteristics of diffusion in all the hydrocarbon lubricants studied were found to be similar to diffusion through other organic membranes. The grades of lubricants studied may be arranged according to their protective effectiveness in the following order: PVK, gun lubricant, OKB-122-7, GOI-54, PP295-5, SKhK-3, TsiATIM-205, and UPS-30. The breakdown of soap lubricant films occurs as a result of their reaction (hydrolysis, dissociation, mycelle hydration) to the surrounding medium and not as a result of diffusion, as in the case of hydrocarbon lubricant, producing changes in the colloidal system as a whole. The lithium-containing lubricants TsiATIM-201, TsiATIM-203, and 1-13 quickly lose their protective properties. On the other hand TsiATIM-221, solidol USS-2, and MS-70 maintain their protective properties for a long time. Orig. art. has: 8 figures.

[SP]

SUB CODE: 11, 14/SUBM DATE: none/ORIG REF: 009/OTH REF: 002/

Card 2/2

GOLUBEV, A.M., Cand Agr Sci -- (diss) "Cultivation of  
perennial grasses in the dry steppe regions of  
Northeast Kazakhstan." Alma-Alta, 1958, 24 pp(Kazakh~~stan~~).  
Acad of Agr Sci. Sci Res Inst of Fodders and Pastures)  
120 copies (KL, 28-58, 108)

- 59 -

GOLUBEV, A.M., aspirant; TIKHONIN, I.Ya., prof., nauchnyy rukovoditel'

Preventing traumatism in cattle marked for slaughter.  
Veterinariia 42 no.7:98-100 Jl '65. (MIRA 18:9)

1. Moskovskiy tekhnologicheskiy institut myasnoy i molochnoy  
promyshlennosti.

GOLUBEV, A.M., aspirant; SHIRYAYEVA, V.I.

Traumatic intramuscular hemorrhage in carcass. Veterinariia 42  
no.10:88-89 0 '65. (MIRA 18:10)

1. Moskovskiy tekhnologicheskiy institut myasnoy i mlechnoy  
promyshlennosti (for Golubev). 2. Starshiy bakteriolog Moskov-  
skogo myasokombinata (for Shirayeva).

GOLUBEV, A.N.

Air curtain in an unloading hatch of a raw material storeroom.  
Tekst.prom.14 no.1:54 Ja '54. (MLRA 7:2)  
(Factories--Heating and ventilation)

YASHKIN, A.Ya.; GOLUBEV, A.N.

Concerning the passband of a  $\pi$ -wave guide. Izv. vys. ucheb. zav.; radiotekh. 6 no.2:148-155 Mr-Ap '63. (MIRA 16:6)

1. Rekomendovana kafedroy fiziki Moskovskogo gosudarstvennogo zaochnogo pedagogicheskogo instituta.  
(Wave guides)

*S. I. Golubev, A.N.*  
STRIYEVSKAYA, S.I.; GOLUBEV, A.N.

Strengthening the ties of publisher and readers. Tekst.prom.15  
no.9:46-47 S '55.  
(MLRA 8:11)

1. Zaveduyushchiy tekhnicheskoy bibliotekoy Sosnevsckoy fabriki.
2. Konstruktor Sosnevsckoy fabriki  
(Textile industry)

L 10375-63

ACCESSION NR: AP3000330

S/0142/63/006/002/0148/0155

44

AUTHOR: Yashkin, A. Ya.; Golubev, A. N.

TITLE: Transmission band of pi-type waveguide

SOURCE: Izv. VUZ: Radiotekhnika, v. 6, no. 2, 1963, 148-155

TOPIC TAGS: waveguide transmission band, waveguide cutoff frequency

ABSTRACT: Theoretical calculation is submitted of the cutoff frequencies corresponding to all the waves near the fundamental mode  $H_{10}$  for a non-symmetrical pi-type waveguide. The modes  $H_{20}$ ,  $H_{11}$ ,  $H_{30}$ , and  $H_{31}$  are mathematically analyzed; the integral equations are solved by the finite  $\lambda$ -Galerkin method [Abstracter's note: the author's name is not given]. Results of radiation are presented graphically, and the dispersion curves are plotted for  $H_{10}$  at 3.17-cm wavelength and for other modes at 10.4-cm wavelength. Good agreement between theoretical and experimental data is reported. Orig. art. has: 25 equations and 3 figures.

Card 1/2

L 10375-63

ACCESSION NR: AP3000330

ASSOCIATION: Moskovskiy Gos. zaochny\*y ped. in-t (Moscow State Correspondence Teachers Institute)

SUBMITTED: 26May62 DATE ACQ: 13Jun63 ENCL: CO

SUB CODE: CO NR REF Sov: 003 OTHER: 001

ls/Ler  
Card 2/2

"APPROVED FOR RELEASE: 06/13/2000

CIA-RDP86-00513R000515910008-2

YASHKIN, A.Ya.; GOLUBEV, A.N.; KALASHNIKOV, V.O.

Calculation of the passband of straight waveguides with stepped cross section. Radiotekhnika i elektron., 10 no.6:1038-1042 Je '65.  
(MIRA 18:6)

APPROVED FOR RELEASE: 06/13/2000

CIA-RDP86-00513R000515910008-2"

YASHKIN, A.Ya.; GOLUBEV, A.N.

Calculation of natural frequencies of resonators with  
complex form of spherical functions. Radiotekhnika 20  
no.11:24-33 N '65. (MIRA 18:11)

1. Submitted December 20, 1963.

"APPROVED FOR RELEASE: 06/13/2000

CIA-RDP86-00513R000515910008-2

GOLUBEV, A. P.

Tables for calculating the amount of excavation work in the construction of a roadbed  
for 750 mm. gage railroads. Moskva, Goslebumizdat, 1949. 269 p. (50-38197)

TF222.G6

APPROVED FOR RELEASE: 06/13/2000

CIA-RDP86-00513R000515910008-2"

ANISIMOV, V.I.; GOLUBEV, A.P.

Transistorized RC-coupled sine wave generator. Radiotekhnika  
16 no.9:55-59 S '61. (MIRA 14:9)  
(Oscillators, Transistor)

ACCESSION NR: A7W017562

S/3074/62/000/047/0195/0211

AUTHOR: Anisimov, V. I. (Candidate of Technical Sciences, Docent); Golubev, A. P. (Engineer)

TITLE: Temperature stabilization of output voltage of semiconductor sinusoidal RC oscillators

SOURCE: Leningrad. Elektrotekhnicheskiy institut. Izv., no. 47, 1962, 195-211

TOPIC TAGS: Rc oscillator, RC generator, sinusoidal generator, oscillator temperature stabilization, thermistor stabilization, semiconductor RC oscillator, nonlinear feedback stabilization

ABSTRACT: The generator output is temperature-stabilized by means of a selective time-delay nonlinear negative-feedback RC network containing a thermistor. Different variants of such a feedback network are shown and their operation analyzed on the basis of the thermistor current-voltage characteristic. The stability of the output oscillator voltage is analyzed as a function of the changes in the amplifier gain, thermistor resistance, and positive-feedback loop of the oscillator. The instability of the generator output can be reduced to about 0.06 — 0.1% per 10C, but if the ambient is lower than + 50C the instability can be made

Card 1/2

ACCESSION NR: AT4017562

much smaller. The effect of the individual components of the network on the instability is also briefly discussed. The over-all output voltage instability of semiconductor RC generators designed in accordance with the conclusions of this investigation do not exceed  $\pm 20$  for a total ambient temperature change from - 60 to + 60C. Orig. art. has: 6 figures and 29 formulas, and 1 table.

ASSOCIATION: Leningradskiy elektrotekhnicheskiy institut (Leningrad Electro-technical Institute).

SUBMITTED: 00Jan61

DATE AQQ: 20Mar64

ENCL: 00

SUB CODE: GE

NR REF SOV: 001

OTHER: 000

Card

2/2

ANISIMOV, V.I.; GOLUBEV, A.P.

Using quadrature feedback for the stabilization of the amplification factor of semiconductor amplifiers with a fixed frequency. Priborostroenie no.4:8-10 Ap '63. (MIRA 16:4)

(Amplifiers (Electronics))

ANISIMOV, Vladimir Ivanovich; GOLUBEV, Aleksandr Pavlovich;  
KOCHINEV, Yu.G., red.

[Transistorized modulators] Tranzistornye modulyatory.  
Moskva, Izd-vo "Energiia," 1964. 222 p. (MIRA 17:8)

ACCESSION NR: AP4043717

S/0106/64/000/008/0044/0051

AUTHOR: Anisimov, V. I.; Golubev, A. P.

TITLE: Equivalent circuits of a transistor operating as a weak-signal chopper

SOURCE: Elektrosvyaz', no. 8, 1964, 44-51

TOPIC TAGS: transistor, transistorized switch, chopper transistor

ABSTRACT: The well-known formulas describing static equivalent circuits of a unipolar- and bipolar-controlled weak-signal chopper transistor are reviewed. Experimentally determined parameters which enter the above formulas, for P15, P103, and P106 Soviet-made transistors, are tabulated; the effects of temperature and the mode of operation on these parameters are explained. Because of diffusion-process inertia and p-n-junction capacitance, transient spikes appear on the output waveform and may distort the operation of a weak-signal chopper considerably. These spikes create an additional keying-frequency noise or shift

Card 1/2

ACCESSION NR: AP4043717

the zero level in d-c amplifiers. Simple equivalent circuits (Figs 7 and 8) are suggested to allow for the switching transients. Formulas are developed for determining the parameters of these circuits, and numerical values of the parameters for P15, P103, and P106 transistors are given. Orig. art. has 8 figures, 20 formulas, and 2 tables.

ASSOCIATION: none

SUBMITTED: 30Mar64

ENCL: 00

SUB CODE: EC

NO REF SOV: 001

OTHER: 005

Card 2/2

ANISIMOV, V.I.; GOLUBEV, A.P.

Equivalent circuits of a transistor operating in a weak signal  
chopping mode. Elektrosviaz' 18 no.8:44-51 Ag '64.  
(MIRA 17:8)

ACCESSION NR: AP4043476

S/0103/64/025/008/1221/1227

AUTHOR: Golubev, A. P. (Leningrad)

TITLE: Selecting component parameters for transistorized operational chopper-stabilized d-c amplifiers.

SOURCE: Avtomatika i telemekhanika, v. 25, no. 8, 1964, 1221-1227

TOPIC TAGS: amplifier, operational amplifier, chopper amplifier, transistorized amplifier, transistorized operational amplifier

ABSTRACT: Recommendations are offered and formulas developed for selecting time constants in transistorized operational chopper-stabilized d-c amplifiers on the basis of a phase margin of 90° or more for all modes of operation. This criterion is recommended to prevent the open-loop frequency characteristic from extending into the left semiplane:  $|\arg W(j\omega)| < \pi/2$ , where  $W(j\omega)$  is the complex open-loop transfer coefficient. By satisfying this criterion, the amplifier

Card 1/2

ACCESSION NR: AP4043476

stability can be assured not only under linear-mode conditions but also under overload conditions (the turn-on moment). Orig. art. has: 6 figures and 19 formulas.

ASSOCIATION: none

SUBMITTED: 12Jun63

ENCL: 00

SUB CODE: EC

NO REF Sov: 004

OTHER: 001

Card 2/2

L 8886-66 EWA(h)/EWT(1)

ACC NR: AP5028031

SOURCE CODE: UR/0119/65/000/011/015/0017

AUTHOR: Anisimov, V. I. (Candidate of technical sciences); Golubev, A. P.  
(Candidate of technical sciences)

ORG: none

22

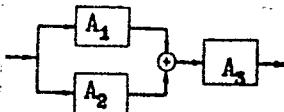
B

TITLE: Broadband transistorized operational d-c amplifier

SOURCE: Priborostroyeniye, no. 11, 1965, 15-17

TOPIC TAQS: dc amplifier, transistorized amplifier

ABSTRACT: The development of a new transistorized low-drift high-accuracy operational d-c amplifier is reported. Intended for integration and scale inversion, the amplifier has this parallel-channel structure: Here,  $A_1$  is a h-f a-c amplifier;  $A_2$  is a modem (chopper) d-c amplifier;  $A_3$  is a broadband d-c amplifier with directly coupled stages. These characteristics are reported: At 200, the voltage gain and the input resistance are 100,000 and 200 kohms for d.c. or 5000 and 75 kohms for 1000 cps, respectively. Stable operation with supply-voltage



UDC:621.375.024:621.382.3

Card 1/2

L 8886-66

ACC NR: AP5028031

variations of  $\pm 2\%$  is reported. Maximum supply current taken from +50 v and -50 v sources is 25 and 45 ma, respectively. Turn-on transient time, 2-3 sec. A non-linear negative feedback sharply reduces the  $A_g$  gain when the output voltage exceeds 50 v. The new amplifier is intended for operation at -60 to +80C and is not critical to usual transistor-parameter deviations. Orig. art. has: 6 figures and 2 tables.

[03]

SUB CODE: 09/ SUBM DATE: none/ ORIG REF: 00001/ OTH REF: 0001/ ATD PRESS:

4152

Card 2/2 rda

L 8802-66 EWT(1)/EWA(h)

ACC NR: AP5026967

SOURCE CODE: UR/0103/65/026/010/1832/1837

AUTHOR: Anisimov, V. I. (Leningrad), Golubev, A. P. (Leningrad)

ORG: None

4455

4455

35

(B)

TITLE: Selection of the optimum frequency response for transistorized operational amplifiers

25

SOURCE: Avtomatika i telemekhanika, v. 26, no. 10, 1965, 1832-1837

TOPIC TAGS: frequency characteristic, transistorized amplifier, mean square error

ABSTRACT: The authors consider the relationship between the standard error of an operational amplifier and the modulus of the frequency response for loop amplification  $W(jw)$ , as well as the relationship between the critical frequency of this response and the transistor parameters. It is recommended that the average decay of  $W(jw)$  should be 30 db/decade in operational amplifiers with parallel amplification channels. A circuit is given for a transistorized operational amplifier which gives the optimum shape of frequency response characteristic for loop amplification. Orig. art. has: 6 figures and 8 formulas.

SUB CODE: 09 / SUBM DATE: 10Feb65 / ORIG REF: 003 / OTH REF: 002

jw

Card 1/1

UDC 621:375.147.3

Z

L-24091-66 EWA(h)/EWT(1)  
ACC NR. AT5025638

SOURCE CODE: UR/2657/65/000/013/0199/0212

AUTHOR: Anisimov, V. I.; Golubev, A. P.

ORG: none

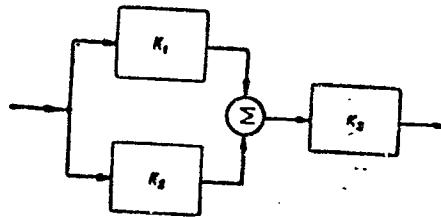
TITLE: Some problems in designing broadband transistorized operational amplifiers

SOURCE: Poluprovodnikovyye pribory i ikh primeneniye; sbornik statey, no. 13,  
1965, 199-212

TOPIC TAGS: electronic amplifier, transistorized amplifier, operational amplifier

ABSTRACT: An optimal structure (see figure) of the operational amplifier consists of h-f a-c amplifier  $K_1$ , 1-f modulator-demodulator d-c amplifier  $K_2$ , and broadband direct-coupled d-c amplifier  $K_3$ . The zero-point drift is considered in a theoretical circuit consisting of a zero-drift amplifier and drift-emf and drift-current sources.

Three circuits of transistorized modulators are analyzed as to their zero-point-drift,



UDC: 621.375.147.3

Card 1/2

Card 2/2

ACC NR: AP6022202

SOURCE CODE: UR/0115/66/000/005/0048/000

AUTHOR: Anisimov, V. I.; Golubev, A. P.

ORG: none

TITLE: Switching of transistorized weak-signal choppers

SOURCE: Izmeritel'naya tekhnika, no. 5, 1966, 48-50

TOPIC TAGS: transistorized circuit, dc ac inverter, switching circuit

ABSTRACT: Switching processes in two transistor-switch circuits are theoretically considered. In a "two-pole" circuit (see Figure 1), the transistor is turned off by a bias voltage; in a "single-pole" circuit (Fig. 2), no bias voltage is needed for turning off the transistor. It is found that the "two-pole" circuit is most suitable for Ge-transistorized weak-signal choppers because it provides higher conversion factor and its zero-point drift is practically independent of the method of switching. For Si-transistorized choppers, the "single-pole" circuit is preferable because it has considerably lower zero-point level. Orig. art. has: 4 figures, 7 formulas, and 1 table.

SUB CODE: 09 / SUBM DATE: none / ORIG REF: 001 / OTH REF: 004  
 Card 1/1 UDC: 621.314.5+621.375.024

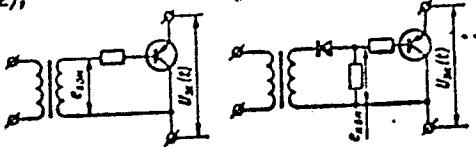


Fig 1

Fig 2

GOLUBEV, A.S.

46-14-1-17/21

AUTHOR: Dianov, D. B.

TITLE: Seminar on Physics and Application of Ultrasound,  
Dedicated to the Memory of S.Ya. Sokolov, a  
Corresponding Member of the Academy of Sciences of  
the USSR. (Seminar po fizike i primeneniyu  
ul'trazvuka, posvyashchennyj pamyati chlena-  
korrespondenta AN SSSR S.Ya. Sokolova.)

PERIODICAL: Akusticheskiy Zhurnal, 1958, Vol.IV, Nr.1,  
p.104. (USSR)

ABSTRACT: A Seminar on Physics and Applications of Ultrasound,  
dedicated to the memory of S. Ya. Sokolov, was held  
on 23-26th October, 1957, in Leningrad Electro-  
Technical Institute imeni V.I. Ul'yanov (Lenin).  
More than 100 scientists and engineers from Leningrad,  
Moscow and other towns took part in this seminar.  
Sokolov's scientific work on ultrasound was described  
by G.V. Odintsov and E.S. Sokolova; and L.L. Myasnikov  
and S.N. Rzheykin described their personal contacts  
with Sokolov. A large group of papers dealt with  
"ultraacoustoscopy", the subject which was developed  
Card 1/3 by Sokolov. L.G. Merkulov, N.A. Yevdokimov and

46- 4.1-17/23  
Seminar on Physics and Application of Ultrasound, Dedicated  
to the Memory of S.Ya. Sokolov

A.S. Golubev, in their paper on "Ultrasonic Methods of Studies of Solids" described Sokolov's and his co-workers' work on ultrasonic testing for defects. A.K. Gurvich spoke on "Further Development of Ultrasonic Apparatus for Quality Control of Welded Joints"; B.N. Masharskiy reported on defect tracing by change of frequency and use of standard defects; transmission of ultrasound across a boundary between two solids was described by B.D. Dianov; V.V. Bogorodskiy and I.V. Zashchuk reported the results of ultrasonic measurement of properties of ice and concrete respectively. The subject of making acoustic field visible was dealt with in papers by V.G. Prokhorov - "On Transformation of an Ultrasonic into a Visible Image" (electron-acoustic convertors), P.V. Ponomarev (use of piezo-electric mosaics), and Ye.D. Pigulevskiy (convex images in liquids). Ultrasonic absorption in liquids was dealt with by B.B. Kudryavtsev in "Use of Ultrasonic Measurements in Physico-Chemical Studies". V.F. Nozdrev reported measurements of critical constants using ultrasonics, and S.A. Balyan spoke on propagation

Card 2/3

Seminar on Physics and Application<sup>46-4-17/23</sup> of Ultrasound, Dedicated  
to the Memory of S.Ya. Sokolov.

of ultrasound in reacting liquids. Measurement of ultrasound velocity and absorption were dealt with in papers by V.F. Nozdrev, V.F. Yakovlev, N.I. Koshkin ("Development of Professor S.Ya. Sokolov's Ideas on Pulse Technique in the M.O.P.I Laboratory"), I.G. Mikhaylov ("Application of a Piezoelectric Quartz Wedge to Measurement of Absorption in Liquids"), V.A. Solov'yev ("Application of a Composite Piezoelectric Vibrator in the Study of Polymers"), and G.N. Feofanov ("Measurement of Velocity of Propagation of Ultrasonic Waves in Liquids using the Method of Pulse Interferometry"). Two papers on the effect of ultrasonics on crystallization were read: I.I. Teumin on "The Effect of Elastic Vibrations on Crystallization and Technical Properties of Metals and Alloys", and Kh.S. Bagdasarov on "The Effect of Ultrasonic Vibrations on Crystallization Processes.".

Card 3/3    1. Physics—Conference    2. Ultrasound—Applications    3. Ultra-acoustoscopy

GOLUBEV, A.S.

Reflection of plane waves from a cylindrical discontinuity. Akust.  
zhur. 7 no.2:174-180 '61. (MIRA 14:7)

1. Leningradskiy elektrotekhnicheskiy institut imeni V.I.Ulyanova,  
(Lenina).

(Sound waves)

370552  
S/032/62/028/002/017/037  
B104/B108

AUTHORS: Golubev, A. S., Merkulov, L. G., and Shchukin, V. A.

TITLE: Attainment of maximum sensitivity in ultrasonic echo defectoscopy

PERIODICAL: Zavodskaya laboratoriya, v. 28, no. 2, 1962, 196 - 199

TEXT: The maximum attainable sensitivity of the echo method depends on the defect-reflected signal-to-reverberation noise ratio. A study of the structure reverberation in solids can in first approximation be made similarly to the study of volume reverberation in the sea. The frequency dependence of the reverberation noise is mainly determined by  $\sqrt{\alpha_p} \exp(-(\alpha+\alpha')r)$

where  $\alpha = \alpha_p + \alpha_{\pi}$  is the total absorption coefficient in a polycrystalline body.  $\alpha_{\pi}$  is the absorption and  $\alpha_p$  the scattering coefficient.  $\alpha'$  takes account of the attenuation of the scattered waves. With increasing frequency the reverberation noise initially increases due to the increased scattering power of the medium. At a certain frequency where  $\sqrt{\alpha_p} \approx \exp(-(\alpha+\alpha')r)$ , a maximum is reached. If the frequency increases

Card 1/b2

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B104/B108

Attainment of maximum sensitivity ...

further the noise decreases owing to increasing attenuation. If the scattering power of the medium increases the maximum is shifted to lower frequencies. If the ultrasonic wavelength  $\lambda$  is considerably larger than the mean grain size of the medium, reverberation noise will be weak. If  $\lambda$  is approximately equal to the mean grain size, an interference-type noise is observed. The authors calculated the frequency dependences of the reverberation noise (Fig. 2), of the useful signal, and of the useful signal-to-noise ratio (Fig. 5). The signal-to-noise ratio can be improved by increasing the transducer area. There are 5 figures and 6 Soviet references.

ASSOCIATION: Leningradskiy elektrotekhnicheskiy institut im.  
V. I. Ul'yanova-Lenina (Leningrad Electrotechnical Institute  
imeni V. I. Ul'yanov-Lenin)

Fig. 2. Calculated (a) and experimental (b) dependence of the relative reverberation noise on frequency for 1X18H9T (1Kh18N9T) steel.  
Legend: (1) mean grain size 1.2 mm; (2) mean grain size 0.3 mm.

Fig. 5. Useful signal to reverberation noise ratio as a function of frequency for a cylindrical defect (diameter 1 mm).

Card 2/b2

OGRYZKOV, Rostislav Sergeyevich; GOLUBEV, A.S., red.

[Ultrasonic testing of plug welded assemblies] Ul'tra-  
zvukovoi kontrol' svarnykh soedinenii na elektrozaklep-  
kakh. Leningrad, 1964. 19 p. (Leningradskii dom nauchno-  
tekhnicheskoi propagandy. Obmen peredovym opyтом. Seriya:  
Elektrotehnologicheskie protsessy i ustanovki, no.3)  
(MIRA 17:7)

GOLUBEV, A.S. [Holubiev, A.S.], inzh.

Device for checking motortruck brakes. Mekh. sil'. hosp. 13  
no.9:28 S '62.  
(MIRA 17:3)

GOLUBEV, A.S.

Stand for testing automobile electric equipment. Mashinostroitel'  
no.1:19 Ja '63. (MIRA 16:2)  
(Automobiles—Electric equipment—Testing)

GOLUBEV, A.S.

Universal device for checking the electrical equipment of motor vehicles. Biul.tekh.mekon.inform.Gos.nauch.-issl.inst.nauch.i tekhn.inform. no.2:50-51 '63. (MIRA 16:2)  
(Motor vehicles—Electric equipment)

GOLUBEV, A.S.

Checking and testing stand for testing motor-vehicle electric equipment. Biul.tekh.-ekcn.inform.Gos.nauch.-issl.inst.nauch. i tekhn.inform. 16 no.10:88-89 '63. (MIRA 16:11)

GOLUBEV, A.S.

Device for checking cylinders of the piston group of carburetor engines. Biul.tekh.-ekon.inform.Gos.nauch.-issl.inst.nauch.-issl.inst.nauch. i tekhn.inform. 16 no.11:54-55 '63.  
(MIRA 16:11)

GOLUBEV, A.S.

Storage-battery truck for starting motor vehicles. Biul.  
tekhn.-ekon. inform. Gos. nauch.-issl. inst. nauch. i tekhn.  
inform. 17 no.2:71-72 '64. (MIRA 17:6)

GOLUBEV, A.S.

Checking device for motor vehicles and tractors. Biul. tekhn.-ekon.  
inform. Gos. nauch.-issl. inst. nauch. i tekhn. inform. 17 no.6:57-  
58 Je.'64.  
(MIRA 37:11)

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the investigation was conducted at various ratios b7c where b7d

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GOLUBEV, A.T.

Mechanized charging of an electric furnace for cobalt smelting.  
Bul.tekh.-ekon.inform.Gos.nauch.-issl.inst.nauch.i tekhn.inform.  
no.12:7-8 '63. (MIRA 17:3)

GOLUBEV, Aleksandr Vasil'evich; AKIMOV, A.T., otvetstvennyy redaktor;  
SHAPOVALOV, I.K., redaktor izdatel'stva; MAKUNI, Ye.V., tekhnicheskiy inzhener

[Remote measurement of the temperature, frost heaving, and stresses  
in thermally active soil layers] Distantionnye izmerenii temperatu-  
ry puchenia i napriazheniya termicheskogo deiatel'nogo sloia grunta.  
Moskva, Izd-vo Akad.nauk SSSR, 1957. 83 p.  
(Telemetering) (Frozen ground)

(MLRA 10:10)

GOLUBEV, A.V.

Remote measurement of temperature using thermocouples without preliminary calibration. Mat. k osn. uch. o merz. zon. zem. kory no.5:  
187-195 '60. (MIRA 13:10)

(Thermocouples)

(Temperature--Measurement)

VARLAMOV, A.I.; GOLUBEV, A.V.; AKHOBADZE, A.V. (Gruzinskaya SSR)

Production and use of peat fertilizers and litter. Torf. prom.  
37 no.5:21-22 '60. (MIRA 14:10)

1. Moskovskiy oblastnoy sovnarkhoz (for Varlamov). 2.  
Smolenskiy oblispolkom (for Golubev).  
(Peat)  
(Fertilizers and manures)

GOLUBEV, Anatoliy Vasil'yevich; DUGINA, N.A., tekhn. red.

[Mechanization of grass drying] Mekhanizatsiya sushki trav.  
Moskva, Mashgiz, 1961. 77 p. (MIRA 15:1)  
(Grasses—Drying)

GOLUBEV, A.V.; PAVLOV, A.V.; Prinimali uchastiye: ANAN'YEVA, Yu.G.,  
laborant; IBRAGIMOVA, Z.R., laborant; MAL'KOVA, M.N., laborant;  
KOTKOVA, I.N., laborant; SHIMANOVSKIY, T.S., laborant; SHOKHINA,  
N.K., laborant.

Investigating heat currents in soils for some types of the  
active surface. Dokl. AN SSSR 139 no.6:66-118 Ag '61.  
(MIRA 14:7)  
(Moscow Province--Soil temperature)

PALAD'KO, Vasilii Vasil'yevich; GOLUBEV, A.V., otv. red.; BUTOMO, I.N.,  
red. izd-va; SUSHKOVA, L.A., tekhn. red.

[Electric resistance thermometers for geocryological research]  
Elektricheskie termometry sопротивления для геокриологиче-  
ских исследований. Москва, Изд-во Акад. наук СССР, 1962. 93 p.  
(MIRA 15:6)

(Thermometers)

GOLUBEV, A.V.

Electrochemical effect in thermocouples on the accuracy of temperature measurements. Mat.k uch.o merz.zon.zem.tory no.8:113-132 '62.  
(MIRA 16:3)

(Temperature--Measurement)

GOLUBEV, A.V.

Multichannel program switch with a low parasitic thermal e.m.f.  
Mat.k uch.o mdrz.zon.zem.kory no.8:152-159 '62. (MIRA 16:3)  
(Telemetering) (Electronic measurements)

GOLUBEV, A.V.; DANILIN, A.I., otv. red.; MEDER, V.M., red.izd-va; ZUDINA, V.I., tekhn. red.

[Measuring and recording soil temperature using thermo-elements] Izmerenie i registratsiya temperatury v gruntakh s pomoshch'iu termoelementov. Moskva, Izd-vo "Nauka," 1964. 145 p.  
(MIRA 17:3)

ARINUSHEV, I.V.; ABRAMOVICH, B.Ya.; GOLUBEV, A.Ya.

Ethyl mercuric phosphate for the control of slime formation. Bum.prom.  
29 no.4:19-21 Ap '54. (MLRA 7:6)

1. Balakhninskiy tsellyulozno-bumashnyy kombinat.  
(Paper industry)

VOLKOV, L.Ye., inzhener; GOLUBEV, A.Ya., inzhener.

Investigation of the engineering characteristics of centrifugal  
purifiers. Bum.prom. 30 no.3:17-19 Mr '55. (MIRA 8:4)

1. NII Bumash (for Volkov). 2. Balakhninskiy tsellulozno-bumashnyy  
kombinat (for Golubev).  
(Papermaking machinery)

NIKOL'SKIY, N.G.; GOLUBEV, A.I.a.

Operation of a double-chamber suction couch roll. Bum.prom.  
35 no.1:18-21 Ja '60. (MIRA 13:6)

1. Zaveduyushchiy proizvodstvom Balakhninskogo kombinata  
(for Nikol'skiy). 2. Rukovoditel' issledovatel'skoy gruppy  
Balakhninskogo kombinata (for Golubev).  
(Balakhna--Papermaking machinery)

GOIUBEV, A. Ya., inzh.

Preparation of silicate glue. Bum.prom. 35 no.2:23-24  
F '60. (MIRA 13:6)

1. Nauchno-issledovatel'skaya laboratoriya Balakhninskogo  
tsellyuloznotumazhnogo kombinata.  
(Balakna--Glue)

GOLUBEV, A.Y.

Intercrystalline Corrosion of Aluminum Alloys (original text in Russian). A. N. Jacobson: J. Phys. Chem. (USSR) Sep '49 (23-9 Mchay): pp 1116-26; 3 illus, 3 tabs.

... results obtained in studying the  
... which

An analysis is given of the results obtained in studying the corrosion stability of intermetallic  $MgZn_2$  compounds, which takes place during the hardening phase of Al-Zn-Mg alloys, which metallurgists long ago have developed alloys based on aluminum with an addition of zinc and magnesium. It was established that only these alloys possess the best mechanical properties where intermetallic compounds form the basis. The strength of hardening phases. These alloys of  $MgZn_2$  are found in their mechanical properties; however, at a simultaneous effect of tensile forces and corrosion agents the alloys acquire a tendency toward "corrosional cracking". Corrosion cracking does not form any characteristic peculiarities in aluminum base alloys and it is known that other metal alloys like brass (seasonal

ASTM-ELA METALLURGICAL LITERATURE CLASSIFICATION  
1950-1951

cracking), electron, etc., are also subjected to such kind of disintegration. The potential of the intermetallic  $MgZn_2$  compound in the process of dressing in a 3% NaCl-solution changes to 0,567 V. The potential in the dressing of magnesium and zinc changes only to 0,068 V. The process of disintegration of intermetallic  $MgZn_2$  compounds begins with the change-over of the magnesium-ion atoms in the solution. The zinc ions found in the solution are proportional to the increased period of corrosion of intermetallic  $MgZn_2$  compounds. The process of corrosion of Al-Zn-Mg alloys under stress, the so-called corrosion cracking phenomenon, is specified in the basic transition of the intermetallic  $MgZn_2$  compounds in the magnesium solution.

GOLUBEV, B.A., inzh.

Methods for cleaning the oil lines of turbine units. Energ. stroi.  
(MIRA 13:2)  
no.1:26-27 '59.

1.Trest "TSentreenergomontazh".  
(Turbines)

GOLUBEV, B.A., inzh.

Block assembly of AR-4-3 and AR-6-5 steam turbines. Energ.  
stroi. no.22:43-44 '61. (MIRA 15:7)

1. Gosudarstvennyy soyuznyy montazhnyy trest Glavpromenergomontazha  
Ministerstva stroitel'stva elektrostantsiy SSSR.  
(Steam turbines)

LASHCHINSKIY, A.A., inzh.; TOLCHINSKIY, A.R., inzh.; GOLUBEV, B.A.,  
inzh., retsenzent; YERSHOV, B.A., inzh., retsenzent;  
LOGINOV, N.N., inzh., red.; VASIL'YEVA, V.P., red.izd-va;  
MIKHEYEVA, R.N., red.izd-va; SPERANSKAYA, O.V., tekhn.red.

[Fundamentals of the design and calculation of chemical ap-  
paratus] Osnovy konstruirovaniia i rascheta khimicheskoi ap-  
paratury; spravochnik. Moskva, Mashgiz, 1963. 468 p.  
(MIRA 17:1)

GOLJIREV, B.A., inzh.; SHLEYFER, Yu.D., inzh.

Plant unit for the continuous production of plastic foam tiles. Khim.  
mashinostr no.2:40-41 Mr-Ap '63. (MIRA 16:4)  
(Tiles) (Plastics)

GOLJDEV, B. E.

Deposits of ferruginous quartzites in Tuva as possible  
sources of iron ores. Inform.sbor. VSEGEI no.22:83-90 '59.  
(MIRA 14:12)  
(Tuva Autonomous Province--Quartzite)  
(Tuva Autonomous Province--Iron ores)

GOLUHEV, B.I., inzhener-podpolkovnik

Methods for suppressing radar stations (as revealed by foreign  
press data). Vest. protivovozd. obor. no.11:51-54 N '61.  
(MIRA 16:10)

(Radar, Military)

S/081/61/000/022/070/076  
B144/B138

AUTHORS: Golubev, B. N., Zaretskiy, B. F., Konstantinov, V. N.  
TITLE: Automatization of screw extruders for plastics  
PERIODICAL: Referativnyy zhurnal. Khimiya, no. 22, 1961, 454, abstract  
22P95 (Mekhaniz. i avtomatiz. proiz-va, no. 3, 1961, 20-24)

TEXT: For automatic temperature control and regulation in the extrusion process, both positional (for larger temperature intervals) and speed-proportional floating control systems are used. But owing to the high inertia of the units hitherto used (e.g., resistance thermometer as pickup, autotransformer as regulating element, control has not proved effective enough. The use of electronic relays and miniature thermocouples gives much better results. At present, electronic machines of the APC-200 (MARS-200) scan-checking type are still more effective. Each of these machines is able to control 20-40 extruder units. [Abstracter's note: Complete translation.]

Card 1/1

FROLOV, K.D.; GOLUBEV, B.N.

Number of cycles in consecutive pumping. Transp. i khran.  
nefti i nefteprod. no. 1:11-16 '64. (MIRA 17:5)

1. Nauchno-issledovatel'skiy institut po transportu i khraneniyu  
nefti i nefteproduktov.

PANASENKO, M.D., kand.tekhn.nauk; GOLUBEV, B.P., kand.tekhn.nauk

Study of a choke-type calorimeter for determining the moisture content  
of steam. Izv. vys. ucheb. zav.; energ. 4 no.11:95-100 N '61.  
(MIRA 14:12)

1. Moskovskiy ordena Lenina energeticheskiy institut. Predstavlena  
kafedroy inzhenernoy teplofiziki.  
(Steam) (Calorimeters)

MATUSEVICH, M.G., kand. ekon. nauk; MILOVANOV, V.A., kand. ist. nauk; NIKITIN, G.A., kand. geogr. nauk; GURVICH, G.Ts. kand. ekon.nauk; GOLUBEV, B.P., nauchn. sotr.; KRUTILINA, T.N., nauchn. sotr.; MIKHNEVICH, L.M., nauchn. sotr.; GIORGIDZE, Z.I., kand. ekon. nauk; RAVUN, I.I., kand. ekon. nauk; OKUN', M.V., kand. ekon.nauk; KOVALEVSKIY; G.T., kand. ekonom. nauk; KHROMOV; P.A., doktor ekonom. nauk, nauchnyy red.; LEONENKO, I., red. iad.vn; ATLAS, A., tekhn. red.

[Economy of White Russia during the period of imperialism, 1900 - 1917] Ekonomika Belorussii v epokhu imperializma, 1900-1917. Minsk, Izd-vo AN BSSR, 1963. 420 p.  
(MIRA 17:3)

1. Akademiya navuk BSSR, Minsk, Instytut ekonomiki.
2. Institut ekonomiki AN BSSR (for all except Leonenko, Atlas).

GOLUBEV, B.P.; VASIL'YEVA, G.A.; KALITIN, P.P.

MEL-MKTS bushings from the zone of high temperatures and pressures.  
Teplofiz. vys. temp. 2 no.3:489 My-Je '64. (MIRA 17:8)

1. Nauchno-issledovatel'skiy institut vysokikh temperatur.

Imparting bronze color to aluminum powder. B. P.  
Golubev. U.S.S.R. 69,883, Dec. 31, 1947. Al powder is  
treated with a hot soln. of  $\text{CrO}_4$  and then with a per-  
manganate soln. to attain the desired hue. The powder  
is then filtered, washed, and dried at a moderate temp.  
M. Hesch.

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GOLUBEV, B. P., (Grad Stud)

Dissertation: "The Investigation of a Throttling Calorimeter for Determining the Humidity of Steam." Cand Tech Sci, Moscow Order of Lenin Power Engineering Inst imeni V. M. Molotov, 18 Jun 54. (Vechernyaya Moskva, Moscow, 9 Jun 54)

SO: SUM 318, 23 Dec 1954

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*Golubev, B.P.*

GOLUBEV, B.P., inzhener

Improving the quality standards for aluminum powder. Standartiza -  
tsiia no. 4:57-58 J1-Ag 55. (MLRA 8:10)

1. Gosudarstvennyy Nauchno-issledovatel'skiy alyumi-  
niyevo-magniyevyy institut  
(Aluminum) (Powder metallurgy--Standards)

GOLUBEV, B.P.

USSR /Chemical Technology. Chemical Products  
and Their Application

I-26

Lacquers. Paints. Drying oils. Siccatives.

Abs Jour: Referat Zhur - Khimiya, No 9, 1957, 32614

Author : Varlamova I.N., Golubev B.P.

Title : Method for the Determination of the Dimensions  
of Particles of Aluminum Powder

Orig Pub: Zavod. laboratoriya, 1956, No 1, 80-82

Abstract: A rapid determination is made using a single  
0.1 g sample of the powder (P), by measuring:  
a) average thickness of particles l on the  
basis of the surface area occupied by the sam-  
ple when it is distributed in a continuous  
single layer on water; b) average transversal

Card 1/2

USSR /Chemical Technology. Chemical Products  
and Their Application

I-26

Lacquers. Paints. Drying oils. Siccatives.

Abs Jour: Referat Zhur - Khimiya, No 9, 1957, 32614

dimension of the particles I under the microscope, at 200-1000 magnification; this dimension is determined by means of an eyepiece grating or object-micrometer, or on a microphotograph by means of a scale-ruler.

Card 2/2

SOV/137-58-9-18268

Translation from: Referativnyy zhurnal, Metallurgiya, 1958, Nr 9, p 6 (USSR)

AUTHOR: Golubev, B. P.

TITLE: Methods for the Calculation of Separators for Classifying  
Finely Divided Homogenous Materials According to Particle  
Size (Metodika rascheta separatorov dlya klassifikatsii tonkikh  
odnorodnykh materialov po razmeram chastits)

PERIODICAL: V sb.: Legkiye metally. Nr 3. Leningrad, 1957, pp 48-53

ABSTRACT: The concentration by volume of a substance in an aerosol can characterize both the physical state of arrangement and the feasibility of achieving classification. It is proposed that the relationship of the mean distance between the centers of the particles ( $b$ ) to their diameter ( $d$ ) be adopted as the parameter determining the concentration by volume, particle size, and the state of the system. Air classification is feasible only within the limits of  $b:d = 2.0$  to  $20.0$ ; with other values for the parameter the classification is impeded. With a particle size  $<0.3$  mm the range of  $0.01$  to  $0.0001$  should be considered a favorable region for concentrations by volume. Bibliography: 19 references. 1. Aerosols--Separation 2. Particles I. M. --Classification

Card 1/1

GOLUBEV, Boris Pavlovich; STOLYAROVA, Ye.L., red.

[Ionizing radiation dosimetry] Dozimetriia ioniziruiushchikh  
izluchenii; konspekt lektsii. Pod red. E.L. Stoliarovoii.  
Moskva, Mosk. energ. in-t, 1961. 234 p. (MIRA 16:6)  
(Radiation--Dosage)

EX-REF

PHASE I BOOK EXPLOITATION

SOV/6564

Golubev, Boris Pavlovich

Dosimetriya i zashchita ot ioniziruyushchikh izlucheniy (Dosimetry and Protection From Ionizing Radiation) Moscow, Gosenergoizdat, 1963. 335 p. 5600 copies printed.

Ed. (Title page): Ye. L. Stolyarova, Docent, Candidate of Physical and Mathematical Sciences; Ed.: L. N. Sinel'nikova; Tech. Ed.: G. Ye. Larionov.

PURPOSE: The book is intended for students of technical schools who are not specializing in nuclear physics but are working in the field of nuclear radiation.

COVERAGE: The book is based on lectures given by the author in a general course of physics, presented in technical schools of higher education. The author discusses ionizing radiation

Card 1/4

## Dosimetry and Protection (Cont.)

SOV/6564

dosimetry methods, simplified methods for calculating the shielding from gamma and neutron radiation, and the calculation of nuclear reactor shielding. The following Soviet scientists are mentioned in connection with dosimetry: K. K. Aglntsev, A. V. Bibergal'; G. V. Gorshkov, N. G. Gusev, O. I. Leypunskiy, and I. V. Poroykov. The author thanks: Professor K. K. Aglntsev, Doctor of Technical Sciences; Docent Ye. L. Stolyarova, Candidate of Physicomathematical Sciences, and Docent B. A. Dement'yev, Candidate of Technical Sciences. There are 100 references, mostly Soviet.

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**Dosimetry and Protection (Cont.)**

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AVAILABLE: Library of Congress

SUBJECT: Nuclear Engineering  
Card 4/4AS/zp/rjm  
2/6/64

BELOVA, Z.S., inzh.; GOLUHEV, B.P., kand. tekhn. nauk; MARTYNOVA, O.I., kand. tekhn. nauk; SAMOYLOV, Yu.F., kand. tekhn. nauk

Study of the electrolytic properties of NaCl and KCl solutions in water vapor with high and supercritical parameters using an electric conductivity measurement technique. Trudy MEI no.48:211-218 '63. (MIRA 17:6)

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Original article has: 7 figures and 2 tables

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MARTYNOWA, O.I., doktor tekhn.nauk, prof.; MEJINA, I.S., kand. dissertation;  
COLUDEV, B.P., kand. tekhn. nauk; SAMOYLOV, Y.I.F., kand. tekhn. nauk

Study of the electrolytic properties of water solutions of some  
electrolytes at high parameters. Teploenergetika 12 no.7x69-72  
(MIRA 18-7)  
Jl '65.

1. Moskovskiy energeticheskiy institut.

L 20649-66 EWP(a)/ENT(m)/EPF(n)-2/EWP(f)/T/EWP(t)/ETC(m)-4 IJP(c) JD/WI/JG/RM/  
ACC NR: AP6008834 NH (N) SOURCE CODE: UR/0294/66/004/001/0115/0119

AUTHOR: Kolosova, N. I.; Kharitonov, F. Ya.; Tsirlina, G. I.;  
Kostyukov, N. S.; Golubev, B. P.

ORG: Scientific Research Institute of High Temperatures (Nauchno-  
issledovatel'skiy institut vysokikh temperatur)

TITLE: Testing the stability of corundum ceramics in liquid potassium  
and sodium alloy

SOURCE: Teplofizika vysokikh temperatur, v. 4, no. 1, 1966, 115-119

TOPIC TAGS: corundum ceramic, ceramics corrosion, liquid corrosion,  
potassium sodium alloy, liquid alloy

ABSTRACT: Three corundum-base materials GB-7 (97.09%  $\text{Al}_2\text{O}_3$ , 0.92%  $\text{SiO}_2$ , 0.08%  $\text{Fe}_2\text{O}_3$ , 0.90%  $\text{CaO}$ , 0.92%  $\text{B}_2\text{O}_3$ , 0.09%  $\text{Na}_2\text{O}$ ), Microlite<sup>b</sup> also known as TsM-332<sup>b</sup> (99.34%  $\text{Al}_2\text{O}_3$ , 0.05%  $\text{SiO}_2$ , 0.03%  $\text{CaO}$ , 0.58%  $\text{MgO}$ ), and A-1<sup>b</sup> (99.74%  $\text{Al}_2\text{O}_3$ , 0.05%  $\text{SiO}_2$ , 0.08%  $\text{MgO}$ , 0.10%  $\text{Na}_2\text{O}$ ) have been tested for their behavior in liquid potassium-sodium alloy. The specimens were prepared from finely ground powders mixed with thermosetting resins by hot pressure casting and two-step firing. The total content of bonding agent after first firing did not exceed 1%. GB-7 showed a 20% strength drop in preliminary tests at 400°C. The specimens of Microlite

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and A-1, 6—7 mm long, were held in sodium-potassium alloy at 700C for 400 hr. Both materials showed a water absorption of 0.03—0.04%, an open porosity of 0.12—0.14%, a bend strength drop of 10%, and a weight loss of less than 0.01%. Both Microlite and A-1 can be used for corrosion-resistant parts for prolonged operation in sodium-potassium alloy at 700C. Such parts are presently undergoing testing in this alloy under dynamic conditions. Orig. art. has: 3 tables. [WW]

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L 33666-66 EWT(d)/EWT(m)/EWP(c)/EWP(v)/EWP(t)/ETI/EWP(k)/EWP(h)/EWP(l) IJP(c)  
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TITLE: Construction properties of corundum microlite at high temperatures

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TOPIC TAGS: high temperature alloy, corundum refractory

ABSTRACT: The article presents a correlation of experimental and literature data on the mechanical, physico-chemical, and thermo-physical properties of corundum microlite at room temperature and at high temperatures (up to 1200°C). The corundum microlite used had the following composition: 99.4-99.5%  $\text{Al}_2\text{O}_3$ ; 0.5-0.6% MgO; 0.03-0.05%  $\text{Fe}_2\text{O}_3$ . The samples were annealed in a batch type flame furnace with prolonged heating for 16 hours at 400°, and then for 12 hours at 1750°. The following properties of the samples were determined: water absorption, specific weight, porosity, hardness, coefficient of linear

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thermal expansion, specific electric resistance, the strength limit for shock bending, fracture, and compression at room temperature, thermal stability, electric strength, refractory properties, deformation temperature, and shrinkage. The experimental results are shown in a table and figures. There is also a photo at 90 magnifications of the microstructure of the corundum microlite. It was found that the material has attractive properties for use as a construction material in machine construction, in the electrical industry, and for high temperature units which operate in aggressive media. Orig. art. has: 4 figures and 1 table.

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